

Applic. No. : 09/771,887

In the Claims:

1-16 (cancelled).

17 (currently amended). A process for producing a composite structural element for a vehicle to dissipate and introduce an impact force acting upon the composite element to an adjoining load-bearing part of the vehicle, which comprises:

providing a thin-section wall part forming an outer skin of the vehicle and having an internal surface;

applying reinforcing elements to the internal surface of the thin-section wall part, the reinforcing elements extending across and beyond the thin-section wall part overlapping the adjoining load-bearing part; and

applying a binder having a foaming agent, and foaming the binder for embedding the reinforcing elements[[,]] to form the composite element.

18 (previously presented). The process according to claim 17, wherein the step of applying the binder is performed by:

placing the thin-section wall into a mold;

placing a counter-mold onto the mold for forming a mold cavity; and

Applic. No. : 09/771,887

introducing the binder into the mold cavity.

19 (previously presented). The process according to claim 17, wherein the step of introducing the binder is performed by using injection cannulas or nozzles.

20 (previously presented). The process according to claim 17, wherein the step of applying reinforcing elements is performed by using reinforcing elements made of renewable raw material.

21 (cancelled).

22 (previously presented). The process according to claim 17, wherein the step of foaming the binder is performed to embed the reinforcing elements.

23 (cancelled).

24 (previously presented). The process according to claim 17, wherein the step of applying reinforcing elements to the thin-section wall part is performed to place the reinforcing elements being disposed in parallel with a longitudinal axis of the thin-section wall.

25 (previously presented). The process according to claim 17, wherein the step of applying reinforcing elements is performed

Applic. No. : 09/771,827

by using reinforcing elements made of renewable raw material, and the renewable raw material is selected from the group consisting of stalks, stalk sections, fibers, bundles of fibers, twisted yarns, filaments, shives, nonwovens, wovens and rovings.

26 (previously presented). The process according to claim 17, wherein the step of applying a binder having a foaming agent is performed by using a binder selected from the group consisting of foamable synthetic, a biological derived substance, a naturally derived substance, matrices of natural substances and matrices of synthetic substances.

27 (previously presented). The process according to claim 17, which further comprises providing low weight recycled cores in regions of low tensile and compressive stress.

28 (previously presented). The process according to claim 27, wherein the recycled cores are unreinforced recycled products, formed with cores selected from the group consisting of foam, foam granules, preformed parts, prebonded parts, foam-textile combinations and textiles.

29 (cancelled).

Applic. No. : 09/771,337

30 (previously presented). The process according to claim 17, wherein the step of providing a thin-section wall part is carried out by using a thin-section wall part made of sheet metal.

31 (previously presented). The process according to claim 17, which further comprises foaming a molding by applying a binder, foaming the binder, and embedding the reinforcing elements.

32 (previously presented). The process according to claim 17, which further comprises bonding the reinforcing element to the thin-section wall by applying a binder and foaming the binder adhesively.

33 (previously presented). The process according to claim 17, further comprising providing a structural element, and securing the structural element to the composite structural element while leaving a channel between the structural element and the composite structural element.

34 (withdrawn). A structural element for a vehicle adjoining a load-bearing part of the vehicle, comprising:

a composite element for dissipating and introducing impact forces acting upon said composite element into the adjoining

Applic. No. : 09/771,887

load-bearing part of the vehicle, said composite element including:

a thin-section wall part forming a portion of an outer skin of the vehicle and having an internal surface; and
~~reinforcing elements being embedded by a foamed binder,~~
said reinforcing elements extending across and beyond said internal surface of said thin-section wall part overlapping the adjoining load-bearing part, said reinforcing elements being embedded by a foamed binder to form the composite element.

35 (withdrawn). The structural element according to claim 34, wherein said reinforcing elements are adhesively bonded to said thin-section wall part.